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Talaphona Number





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(54) COMPOSITIONS AND METHODS FOR THE PULMONARY DELIVERY OF AEROSOLIZED MACROMOLECULES

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(*) Notice: Subject to any disclaimer, the term of this

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Related U.S. Application Data

- (63) Continuation of application No. 08/423,515, filed on Apr. 14, 1995, and a continuation-in-part of application No. 08/417,507, filed on Apr. 4, 1995, now abandoned, and a continuation-in-part of application No. 08/383,475, filed on Feb. 1, 1995, now abandoned, which is a continuation-in-part of application No. 08/232,849, filed on Apr. 25, 1994, now Pat. No. 5,607,915, and a continuation-in-part of application No. 08/313,707, filed on Sep. 27, 1994, now abandoned, and a continuation-in-part of application No. 08/309, 691, filed on Sep. 21, 1994, now Pat. No. 5,785,049, and a continuation-in-part of application No. 08/246,034, filed on May 18, 1994, now abandoned, which is a continuation of application No. 08/044,358, filed on Apr. 7, 1993, now abandoned, which is a continuation-in-part of application No. 07/910,048, filed on Jul. 8, 1992, now Pat. No. 5,458, 135
- (51) Int. Cl.⁷ A61K 9/00; A61K 9/12; A61K 9/14

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(57) ABSTRACT

According to the subject invention, dispersible dry powder pharmaceutical-based compositions are provided, including methods for their manufacture and dry powder dispersion devices. A dispersible dry powder pharmaceutical-based composition is one having a moisture content of less than about 10% by weight (% w) water, usually below about 5% w and preferably less than about 3% w; a particle size of about 1.0–5.0 μ m mass median diameter (MMD), usually 1.0–4.0 μ m MMD, and preferably 1.0–3.0 μ m MMD; a delivered dose of about >30%, usually >40%, preferably >50%, and most preferred >60%; and an aerosol particle size distribution of about 1.0–5.0 μ m mass median aerodynamic diameter (MMAD), usually 1.5–4.5 μ m MMAD, and preferably 1.5–4.0 μ m MMAD. Such compositions are of pharmaceutical grade purity.

22 Claims, No Drawings